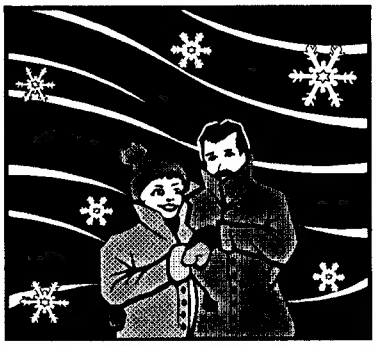
Chelmsford Amateur Radio Society

Club Station Call Sign GØMWT

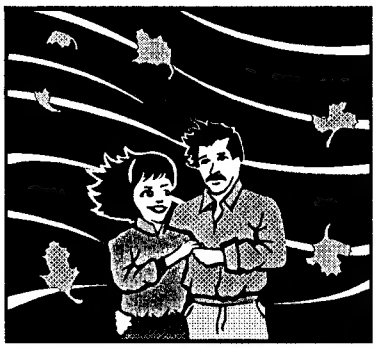
Issue Number 380 — September 1997

THE SEPTEMBER MEETING

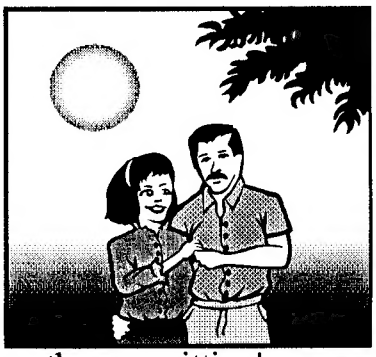


There has been a change to the published programme in that Stanley Wood will not be able to present another talk in his Radio History series because he has an important family commitment, however, Stan has promised to be with us on a mutually agreeable date during next year.

The Committee have agreed that rather than shuffling dates around for other planned meetings, we will create an 'extra' from the extensive resources we have within our Society.



A number of our members take an interest in "The Weather" either in surface measurements, i.e. rainfall, temperature barometric pressure, wind speed/direction, etc., so Chairman John, G8DET thought it would be appropriate to call on our "experts" to provide us with some short presentations of their observations.



The meeting opens at 7.30pm in the Marconi College, Arbour Lane. We hope you will be able to attend..... weather permitting!

DATES FOR YOUR DIARY

31 Aug. SOUTHEND RADIO & COMPUTER BOOT SALE.
2 Sept. CLUB MEETING - A Seminar on the Weather.
14 Sept. BARTG'97 - Sandown Park, Esher, Surry.
20 Sept. RSGB HQ SATURDAY OPENING.
26/28 Sept. RSGB HF/IOTA CONVENTION - Old Windsor.
28 Sept. HARLOW & DARC RALLY - In the sports centre.

DF NEWS

Four events are scheduled for September; on Friday 5th a Colchester evening event at Fordham Heath, on Sunday 14th a RSGB Qualifying event at Echelford, on Friday 19th a Chelmsford evening event at Tiptree Heath and on Sunday 28th The RSGB National Final at Slade.

LAST MONTH'S MEETING - Geoff, G7KLV

At our first Nostalgia Evening last year we gave some idea of the Club history but had to admit defeat on two significant dates. The date of the formation of CARS is thought by Arthur G3KPJ to be somewhere between late '56 and early '57. The other date was the move here to our present venue. Arthur recently came across some early RSGB Bulletins of WW2 vintage. These give some idea of Amateur Radio during and just after the war prior to the welcome lifting of restrictions. During the war meetings were held in members QTH's until 1946 when the late Fred Smith loaned the workroom above his radio shop in Moulsham St. for Club meetings. This remained the venue for about six years until we had our first meeting here on Tuesday 4th March 1952 at 7.30 pm!

One of the highlights of our last Nostalgia Evening was the welcome appearance of one of our original members, James Watt G6ZC and on that occasion he told us a story about the early days of radio concerning a piano and an aeroplane.

In recalling this I inadvertently said it was a grand piano! Nothing of the sort said James! Then to our great amusement and pleasure recounted the true story once again.

On a more serious note he told us about a project he was involved with during WW2, the design of an underwater supersonic buoy, used as a navigational aid to guide naval surface ships and submarines into landing places on the enemy coast. The design work and trials on the development models were carried out within about nine months.

The early buoys were laid by surface ships or submarines at periscope depth. Later models could be fired from a submarine's torpedo tubes thus avoiding possible observation by the enemy but this had required some involved design work to adjust the buoyancy. Having done the design work James was then involved with sea trials on ships and in submarines, an experience he is not likely to forget! The supersonic signals were transmitted at predetermined intervals and could be heard by a ship's ASDIC for a distance of five miles. After a set time or if they were swept up by enemy minesweepers they were designed to self-destruct! The buoys were successfully used in the Mediterranean and on D-Day. He brought along the only surviving piece of hardware from the project which was a stepping mechanism used in the Mk.1 models. Later versions used a well tried and tested time clock as used on gas lamps!

Our second guest was Willie McClintock G3VPK, well known to older club members as Chairman in the 'eighties and President of the RSGB in 1986, having served in various capacities prior to that. His grandfather had sparked his early interest in radio which really blossomed out at Queens, Belfast when he joined the radio club there. After a spell with HF he then inclined to VHF which has since been his primary interest. He took the RAE, applied for his callsign which arrived on the morning of the 1966 VHF National Field Day and, for which, he had already organised a team. Although very keen he admitted they didn't know much about contests but during the day they eventually learnt what QRA meant, the quirks of Aurora's and the necessity of having a range of TX frequencies!

After graduation he came to Little Baddow, ideally located to pursue his interest in 4m contesting and RAYNET. One of his first contacts was Howard G3PGN, who was fooled by the Irish accent into thinking he was doing some real DX! Eventually he, and others, formed a sub-group of the Club, the Mid-Essex VHF/UHF Contest Group and eventually won VHF NFD's four years running. During one contest he was troubled with sideband splatter from a badly adjusted AM TX and complained about it to the VHF Contest Committee. They hauled him up before them. He managed to bamboozle them with some sweet talk and a few calculations and, presumably, convinced them it was the other group's TX and not his own RX! He heard nothing more until an invitation arrived inviting him to join said Committee! He not only beat them but joined them! He served on the Committee for the next twelve years.

One thing led to another and he found himself getting more and more involved with the RSGB, eventually being elected to Council.

(continued on page 2)

LAST MONTHS MEETING - continued.

He worked his way up the tree until in 1986 there was no one left but Willie to become President! He makes it all sound like 'Buggins turn' doesn't he! At that time the Society was heading towards financial loss. He set out to reverse this trend and eventually succeeded. Much of the trouble was due to existing working practices. Members of Council, all distinguished in the hobby side were not skilled in running a business! Eventually a trained manager was employed. As well as putting in a lot of extremely hard work there, he enjoyed getting out and meeting members and felt that the personal contact was beneficial for both the Society and members. So much for his reminiscences about the RSGB, he then turned to thoughts about CARS. These he summed up very succinctly as 'sausages and NFD'! He brought along one of his treasures, a Marconi 70Mcs VHF RX Type R220.

Our third guest was Stanley Wood, a true master of nostalgia! His current interest is in coherers but had mislaid his own sample! There were many different types proposed towards the end of the last century but in practice they were unreliable and were difficult to coax into operation. Varley had produced a form of coherer consisting of carbon granules which was used for the protection of apparatus connected to overhead lines from lightning. Sir Oliver Lodge also studied and produced a coherer which was produced commercially for a while. The French Dr.Branley produced a coherer which Marconi heard about and he persevered with it and made it work reliably. It was this device that he demonstrated to (Sir) William Preece of the GPO. Branley's work was not in wireless but the biological field. Lodge demonstrated that light waves passing through the retina of the eye impinged on a coherer type device which converted the signals to a comprehensible signal to activate the brain! Both of them associated the coherer in biological applications as opposed to communications applications. Many inventors in that period expended a lot of energy contesting each others claims and Branley's praise for Marconi was unusual!

Stanley then suggested that Marconi's first interest in wireless was stimulated by scientific articles he chanced to see on holiday. These were by a Professor Rhigi who just happened to live next door to the Marconi family QTH, would you believe! Although not a formal student of the Professor's he obviously took the younger man under his wing and, although believing his ideas far fetched, nevertheless encouraged him. Rhigi was demonstrating that electromagnetic waves obeyed the same laws as light waves and didn't at that time have faith in Marconi's contention that the former could be used for communication.

Thomas Hughes was one of those 'might have beens'. He actually demonstrated wireless communication quite by chance about twenty years earlier than Marconi and the rest. He was investigating phenomena associated with an induction coil and noticed that it made a noise in a nearby earpiece. There was a loose joint in the circuit which was acting, in effect, as a coherer. On being told that it was an induction effect he didn't pursue his experiments, put the apparatus away in a cupboard and forgot it! Hughes was a professor of music and had already invented a teleprinter. What would the outcome have been had he pursued his 'wireless' experiments?

Our fourth speaker was Andrew G4KQE who gave us a few facts and anecdotes about DF'ing over the years culled from the News Letters.

Space precludes a resumé of this and also more details of the many interesting things brought along by members for discussion. They included Marconi Russian sales literature, CODAR TX and RX, Eddystone plug in coils, a 50watt modulator amplifier, an Admiralty key, two Eddystone RX's EB35 and a BC RX, a Pye Cambridge, Type 830 TX, R502 Wavemeter, USAAF throat mike, Grundig TK20, motorised BC RX, 2m AM TX, Leak tuner, BT Herald, IC tester and pulse stretcher, lab. type voltmeter, an early transistor 200mW AF amp, a horn loudspeaker, an early PYE signal generator, a selection of beautifully constructed units and a number of old photographs. My apologies for any omissions!

Now it's thank you time! First and foremost to our three guest speakers, please come again, to Andrew KQE, to members for their support with equipment, to Roy PMX for recording the proceedings and finally to our Chairman, John DET for getting the 'show on the road' and, the really clever part, in keeping it there!

Editorial Note: The member responsible for all the research for the meeting and this excellent report must also receive a mention in these columns.

Thank you Geoff, G7KLV for all your hard work.

ROLL OUT THE BANNER!

Our Deputy Secretary Colin, G0TRM promoted the idea in committee that the Society should have a "Show Presence Banner" for use at special events, etc. The Committee agreed the size and the cost. Colin will arrange its production with a local print shop.

MORE ON TROPO - Brian, G3CVI

This short article is to follow on from my reporting of the Jim Bacon presentation in July....."A few dotted I's and crossed T's" one might say...

It is wise to remember that every radio wave has to encounter the troposphere on its way from its source to wherever it is going, be it back to earth or to outer space. It is thus reasonable to expect that all waves could be affected to a greater or lesser extent by their journey through the "weather zone" which is what the troposphere amounts too, however, the effects are greatest from about 30MHz upwards.

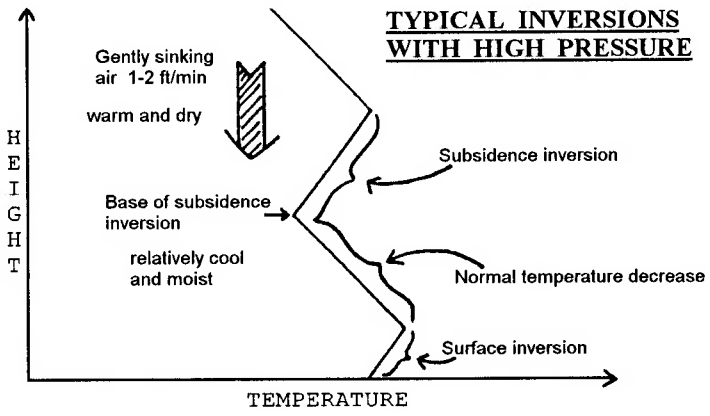
Any change in ion density will cause signals to be refracted but let us remember that it is not the ions which do the refracting but rather the free electrons which leave behind the ions when they are knocked out by bombardment from cosmic particles, sunlight and magnetic effects, etc. The electrons carry negative electric charges leaving the ions positively charged. It is the sharp vertical changes in refractive index due to the free electrons which brings about the desirable "bending" of our signals.

The spasmodic occurrence of the inversion layer refraction is due to the unstable presence of these electrons whose geographical position, height and numbers vary so much. The enemy as far as DXers are concerned is recombination. The electrons re-unite with their former host ions to form neutral gas molecules in the atmosphere. They then lose the ability to give any appreciable refraction, the index having returned to a more or less uniform value. This recombination is triggered by condensed moisture such as fog which is cloud at very low levels and any other cloud formations higher up in the locality.

As Jim reminded us, the inversions which can develop at various heights are zones of descending air which warms and consequently becomes dryer thus supporting the presence of ions and electrons. The arrival of moisture from any source is responsible for the demise of these zones which we so eagerly seek especially if we are working 10M downwards.

Jims tips:-

(A) Watch for slow moving 'Highs'.
(B) Smoke, fog and low cloud mean inversions.
(C) Stay below the inversion.
(D) Best paths are round the edges of Highs.
(E) Best conditions apply when there is moisture below the inversion.
(F) 1, Watch for sea breezes. 2, Warm air over snow.



COMMITTEE MEETING

The next Committee meeting will be held at 7.30pm on Wednesday 10th September, in Telford Lodge, you are welcome to join us.

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FOR SALE

KENWOOD TS-680S HF/6Mtr Transceiver, £600 o.n.o.
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Deadline for the next NewsLetter is Friday 26th September.